

PATENT

File: Greene-P1-04

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventors	:	REES, Frank L.
Serial No.	:	PCT/US2004/039909
Filed	:	24 November 2004
For	:	GAUSS-REES PARAMETRIC ULTRAWIDEBAND SYSTEM
Priority Date	:	25 November 2003
Examiner	:	LOBO, Ian J.

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PCT Legal  
Honorable Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REPLY OR PROVISIONAL REPLY TO WRITTEN OPINION OF  
THE INTERNATIONAL SEARCHING AUTHORITY**

S I R :

Applicant respectfully responds to the International Search Report and Written Opinion dated 18 August 2008, and requests reconsideration.

First, it is respectfully submitted that the Written Opinion is improper. In particular, the Authorized Officer's only comment as regards two hundred and twenty nine (229) claims is that "they do not add inventive step." There is no explanation whatsoever as to why each and every one of these claims is deemed to be devoid of inventive step. Applicant requests a proper examination and a proper Written Opinion, plus an opportunity to file a Reply to the proper Written Opinion.

Applicant notes the highly irregular proceedings in this case. There was a preposterous genus/species basis contention of lack of unity of invention in the Invitation to Pay Additional Fees. There is no such thing as genus/species in the PCT. The Invitation was overcome by a Protest and a Decision. Then Applicant filed a Petition to Invoke Supervisory Authority - simply to get examination. As noted in the Decision responsive to

the Petition, Applicant's file could not be located – highly irregular and coinciding with an apparent unwillingness to properly examine the application. Indeed, despite the Decision on the Petition, there as no PCT examination forthcoming. Thus, Applicant filed a Second Petition to Invoke Supervisory Authority at a time when the US National application was already in examination. Applicant also filed a Petition to Suspend the US National application pending examination of the PCT application, whereupon the instant Written Opinion was issued: with no explanation whatsoever as to why some two hundred claims are deemed to lack inventive step.

Applicant paid for a proper PCT examination, and the fees were accepted. It is highly improper to take the money without doing the work.

The PCT examination is therefore not a proper PCT examination, and the Written Opinion is not proper either. Supervisory authority is requested in order to obtain examination and a Written Opinion compliant with the Protest Decision. See the enclosed Third Petition to Invoke the Supervisory Authority and a copy of the Second Petition to Suspend that is being filed in the U.S. National Application.

Second, while the Authorized Officer does offer some explanation as regards claims 1, 115, 116, and 230, as lacking inventive step pursuant to PCT Article 33(3). In view of Sen et al and Rees, the comments lack sufficient explanation.

As regards claims 115 and 230, there is no mention in Sen or Rees of the deconvoluting to overcome an impedance discontinuity and the copying into the Written Opinion from wording in the US parent application regarding claims where this limitation is not present suggests that consideration was not given to this claim element. This is not reassuring in view of the lack of particularity given in the examination of Applicant's other claims.

As to all of the claims, the cited art does not mention a secondary wavelet produced by the nonlinear effect either, but the Authorized Officer offers no explanation.

It is noted that the contentions of the Authorized Officer correspond to a similar

argument that he made in rejecting the corresponding claim 1 of the US parent, Ser. No. 10/722,648 (some claims allowed but claim 1 now on appeal). One of the issues in the appeal is that the Examiner did not adequately explain the rejection enough to comply with (US) 35 USC Sec. 132. (See also Rule 104.) Though that statute is not applicable to the PCT, the point is that examination is being obstructed because there is a lack of adequate explanation. Quoting from Applicant's Reply Brief:

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**C. Failure to provide a response sufficient under 35 U.S.C. Sec. 132**

While the foregoing is determinative for reversal of the Final Rejection, should the Board feel otherwise, it is also submitted that the Examiner failed to provide a proper rejection under 35 U.S.C. Sec. 132.

**i. Appellant's Argument**

In the Brief at page 17, Appellant stated:

"35 U.S.C. Sec. 132 requires that the PTO provide 'the reasons for such rejection... together with such information as may be useful in judging the propriety of continuing prosecution....' The Examiner failed to provide the requested information.

Attention is respectfully directed to Appellant's filing of April 26, 2007, pages 3, 4, 5, 7, and 8. A rejection non-compliant with Sec. 132 is clear error. Evidence, such as the Examiner's declaration, was also required - but not provided.

As stated above, there is no mention whatsoever of the claimed secondary wavelet in cited art cited in the Office Action. Appellant requested, and is entitled to 'information' as to how, pursuant to the Examiner's rejection, backscattering discloses the secondary wavelet as claimed and how or by what means the Examiner's contended secondary wavelet is produced by the nonlinear effect in Sen et al. Appellant required PTO evidence to support the contentions that these elements were disclosed, but there was no Examiner response. Because there is no mention whatsoever of the claimed secondary wavelet in cited art in the Office Action and no proper means by which to understand the basis for the rejection, and further because the dictionary definitional evidence contradicts the Office Action and the Final Rejection did not provide the 'information' sought pursuant to Sec. 132, the rejection fails to make out a proper rejection."

**ii. Examiner's Argument**

The Examiner did not respond to this argument.

**iii. Appellant's Reply**

It is indeed disappointing that the Examiner did not heed nor respond to this statutory requirement. From the failure to provide statutorily required information or to consider Appellant's evidence of nonobviousness though to the appeal, the examination of this application has not been carried out properly. Of course, it hurt the Appellant.

### III. Summary

The rejection is premised upon a misunderstanding of the art, as set out in the Reply, Section I Overview, and repeated here for emphasis.

"As an overview, as the terminology is used in the art (e.g., dictionary definitions of record and in Appellant's specification), a 'wavelet' is a subset [or snippet] of a wave. A 'secondary wavelet' results from non-linear acoustic generation [or radiation] produced by matter when a primary wave impinges upon the matter. The terms 'primary' and 'secondary' are consistent with a transformational process - think the primary and secondary windings of a transformer. On the other hand, 'backscattering' [or backscatter] describes a deviation of a wave upon striking an object at a deviation angle greater than 90 degrees from the incident wave - think of light reflecting back from a mirror in the direction of the light source. The cause and effect of backscattering are different than the cause and effect of a secondary wavelet.

Backscattering therefore is the resulting action [change in direction] of a primary wave, whereas a secondary wavelet is radiation produced by the materials being impinged by the primary wave, so as to cause non-linear effects. (Consistent with the instant invention herein, these non-linear induced effects result in different space-time relationships (frequencies, etc.) that are indicative of the type of material, so as to enable the detection that is more precisely stated in the claims.) In sum, one having ordinary skill in the art would know that "backscattering" and "a secondary wavelet" are different phenomena that have no bearing on each other, and that backscattering in no way reads on a secondary wavelet.

To further appreciate the different meanings of secondary wavelet versus 'backscattering' in the context of the claim as a whole, consider claim 1.

1. A method of identifying an object, the method including the steps of:
  - directing a primary acoustic waveform at the object to produce a nonlinear acoustic effect by using multiple projectors driven by a synthetic spectrum;
  - receiving a secondary wavelet produced by the nonlinear effect; and
  - processing the received secondary wavelet in identifying the object.

Backscattering is not ...produced by the nonlinear effect....

The present invention claims a secondary wavelet produced by the nonlinear effect. The Sec. 103 obviousness rejection is premised on Sen et al., which is directed to backscattering. Backscattering and secondary wavelets are different phenomena that have no bearing on each other. Contrary to the Examiner's contention and

rejection, backscattering does not read on secondary wavelet produced by the nonlinear effect."

In a nutshell, then, the rejection is premised upon a misunderstanding of the art.

The misunderstanding manifests itself in many ways. Examiner misconstrued explicit claim terms and failed to timely consider definitional evidence of unobviousness or carry out prosecution in accordance with MPEP Sec. Sec. 707.7(f).

More so, the applied references fail to disclose all expressly claimed elements, such that a prima facie case of obviousness has not been made out.

Even if somehow all claim requirements can be opined into the cited art, there has been no proper reasoning as to how or why one of ordinary skill would combine them to reach Appellant's claimed invention because it would lead to inoperability of references and change the principles of operation references, and further the references teach away from a combination to reach Claim 1 as a whole. (No proper rational or evidence has been provided in which the combination of the prior art could result in the Appellant's Claim 1, since as shown, an acousto-optic mirror does not function in the granular bed of Sen et al. to allow for mine detection.)

Moreover, even if one could contort the prior art teachings to meet Claim 1, the rejection is still improper for failing to comply with 35 U.S.C. Sec. 132. Accordingly, the Examiner has not met his burden of making out a prima facie case that Claim 1 is unpatentable.

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In sum, Applicant requests a proper examination under the PCT: not merely contending that some two hundred claims lack inventive step; not ignoring of claim elements such as de-convoluting to overcome an impedance discontinuity; and not failing to explain why there is a lack of inventive step where the cited art does not mention a secondary wavelet produced by the nonlinear effect. And definitely do not lose the file again.

The Written Opinion should be replaced with a proper Written Opinion, and Applicant should be permitted the PCT right to respond to the proper Written Opinion. For this reason, this document is characterized as provisional, in the hope that a fair opportunity will be permitted responsive to a proper Written Opinion.

The Commissioner is hereby authorized to charge any fees associated with the above-identified patent application or credit any overcharges to Deposit Account No. 50-0235.

Please direct all correspondence to the undersigned at the address given below.

Respectfully submitted,

A handwritten signature in dark ink, appearing to be 'PK Trzyna', followed by a horizontal line.

Date: 8 September 2008

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